Slavery than the state of things which seems to give free to the pies of such exclusion.

Such is at present the issue that overrides all others, even the Slavery Extension question itself. It is soon to be brought to trial. We hope for a righteous verdict, but it may be decided adversely. The immease Slave Power, now of fifty years' unchecked growth, and almost unchecked occupancy of the Government, the efficial power so mighty and so corrupt, the strong foreign vote, or the worst and most unreasoning part of it, a perverted ecclesiasticism joining hand with an infidelity that would deny the humanity of the colored race, a blind party spirit, an unnatural combination of the millionaire with the lowest rabble of our great cities, together with that timid, stupid thing which sometimes calls itself conservatism, but has no right to the rame—all these combined may overcome the reason, the moral worth, and the conservatism of the natice; and then (for we can hardly expect any more favorable circumstances for the contest the whole matter is placed forever under the ban. We may quarrel ever so nationally about things comparatively of little moment; we may have two parties in every State on the question who is to have the smalls of office: but ever so nationally about things comparatively of little moment; we may have two parties in every State on the question who is to have the spoils of office; but the great question, that which gives dignity to partieseven to the one that defends the extension of servirude—this is to be forever ignored. To have any feeling upon it is fanatical; to discuss it is sectional; to form a party upon it is the ranket tracero.

Be it so, and what then? This is the point to which our argument, though seeming to ramble, has ever been tending. Be it so. The issue is decided. Such a party as the Republican is not to be allowed. Notwithstandas the Republican is not to be allowed. Notwithstand-ing its acknowledged moral worth, its great intelli-gence (both of which attributes none of its adversaries dare deny), notwithstanding its million voters, it is no legitimate party, and must disband. Then we go back legitimate party, and must disband. Then we go back to our starting proposition. Then, we say, comes the real danger. This legal, consitutional, intelligent, moral party—in other words, the Republican party—is the safety-valve of the nation. As far as this party is concerned, Slavery is to be opposed by means deemed legal and constitutional. Opposed it must be in some way, for the moral sense of freemen will never submit passively to its unresisted extention: but this party aims to check it in full accordance with the great ideas and compromises of our Government. It only asks for action through the ballot box, and the legitimate action of the legitimate organs of the body politic. Let it be once nuderstood that this cannot be done, and then, we say, comes the peril, the fearful peril for which the only remedy, short of revolution, is the crushing out some of the comes the peril, the fearful peril for which the only remedy, short of revolution, is the crushing out some of the sacred feelings of the human soul. All discussion is put down, but the evil still remains unmitigated—yea, aggravated, made angry and defiant by its triumph. The Slavery party insults Freedom with a still fiercer intolerance, but political opposition is forbidden. The safety-valve, we say, is gone, and explosion must follow. Men will not hate Slavery the less, now it has grown so rampant; but, every other hope of resistance perished, it will occur to the more religious and conservative minds, whether revolutionary means may perished, it will occur to the more reinglous and con-servative minds, whether revolutionary means may not be employed against so great and so defiant an evil. Men who have read in their Bibles submission ment of a Nero, will turn to other passages, and deeply ponder whether with this there may not be also con-sistent that which saith: "If thou forbare to deliver them that are drawn into death, and those that are ready to be slain; if thou sayest, behold we knew it not; doth not be that pondereth the heart consider,

"not; doth not he that ponderent the heart consider,
"and he that keepeth the soul, doth not he know it?
"and shall he not render to every man according to his
"works?" There is danger of that stern fanaticism,
if any of our shallow publicists choose to call it so, that
righteous wrath that has always been aroused whenever there has been an attempt thus made to crush out
the most truthful instincts of even our fallen humanity.

Other political issues having now taken a wholly
subordinate place, the question must be agitated.

Every young man must see that, in respect to political
importance, there is nothing to be compared with it.
The Republican organization is the only hopeful party
by which it can be met. Corrupt presses and heartless
officeholders may now denounce the Sumners and the
Sewards, who are striving by lawful and constitutional
means to carry out lawful and constitutional movements; but the triumph of these denouncers will only
be the means of raising up, instead of them, many a
John Brown, ready to give himself and his four slaughtered soma a sacrifice, if there be ino other means to
stay the plague. No men, in fact, have so much
at stake in the existence of the Republican, or some
similar party, as the slave owners of the South. There
may be civil and conservative treatment of Slavery;
there may be even some respect for the institution and
its hard necessities, so long as it is allowed to be opmay be civil and conservative treatment of Slavery; there may be even some respect for the institution and its hard necessities, so long as it is allowed to be opposed by political and constitutional means. It is in this light that the great Republican party of the North is most conservative. Through it, the sense of individual wrong, and of general political injustice, finds its legal vent. Let it have its legitimate action, let thinking and conservative men averagehers. North and its legal vent. Let it have its legitimate action, let thinking and conservative men everywhere, North and South, give it its legitimate support, and all is well. Take it away, and feeble is the defense that stands between the Southern rights of property, if we may shus conservatively style them, and a volcano of pent-up feeling, the more intensely boiling that it is forbidden all constitutional or organic political action. T. L.

PURSUIT OF FREDERICK DOUGLASS.

From The Rochester Express, Oct. 25.

The operations of this "institution," do not usually come to the knowledge of the public, as there is no law requiring its directors to make verified statements of the "freight and passengers" it conveys. Viewed in a financial light, the business of the road is of considerable importance. On Saturday evening last, not less than \$15,000 worth of "property," passed through this city on a train of the "Underground," fairly rivaling the Central. But the most wonderful part of the story is, that in the transit acroes the Suspension Bridge at Niagara, the "property" suddenly became metamorphosed into about a dozen smart, intelligent, young and middle aged men and women. These "chattels personal" were part of a large shipment which left Alexandria, Va., about the time of the Harper's Ferry insurrection.

Uncle Sam's officers are quite numerous in this

rection.

Uncle Sam's officers are quite numerous in this neighborhood just now. We saw in the Arcade, yesterday afternoon, Mr. Spencer of Uites, the United States Attorney for this District, and understand there are some half-dozen Deputy Marshals from different parts of the State who are sauntering about.

We suppose Mr. Spencer's visit here was in relation to the proceedings pending before United States Commissioner Storrs, in which certain parties are charged with a violation of the Post-Office laws; but it is intimated that he is striking at higher game, and that his business here is nothing less than the personal direction of the efforts making to arrest Fred. Douglass on a charge of treason, and send him to Virginia for trial! If this be so, we rather guess his mission will fail of accomplishment. We presume that Fred. would have no objection to submit to the judgment of a Jury of New-York the amount of treason there was in the "monthful" of which he invited "Ossawatamie Brown" to partake a year ago; but to place himself in the power of Gov. Wise and a Jury of Virginia slave-holders would be to rush upon certain death, with or without law.

From The Rochester Democrat, 24th.

Licenderical that U.S. Attorney Ould of Wash-

without law.

From The Rochester Democrat, 24th.

It is understood that U. S. Attorney Ould of Washington, and other Federal officers, were here yesterday; and it is supposed they came hither for the purpose of arresting Fred. Douglass, for his alleged participation in the organized scheme against the Slaveholding States, of which the Harper's Ferry insurrection was but one of the appointed results. Such being the prevailing impression, we have taken a little pains to inquire whether Fred. is likely to be eaught; or whether be has placed himself beyond the jurisdiction of the officers supposed to be in quest of him. We are told that he is "safe;" or in other words, that he is already outside of the United States. This information may be true and it may not be. But it is likely to be true since it is so easy a matter to go from Rochester to Canada, either by Buffalo or Niagars, or other routes. However, we do not pretend to be accurately posted; and we would not have the United States officers rely upon our information so implicitly as to modify their upon our information so implicitly as to modify their operations in the least.

The Rochester Union of the 27th says: "We are assured that he (Douglass) was in Canada, rear the Suspension Bridge, a day or two since, and there intimated to a Rochester gentleman that he thought it was best for him to remain where he was for the present. We do not believe that any attempt will be made to take Douglass out of New-York.

CHAUTAUQUA COUNTY.

To the Editor of The N. Y. Tribune.

Sin: In a paragraph a few days since you appeared to thisk that the spelling of the first syllable of Chautauqua should have been changed as well as the substituting of the letter a for the final c. There has never been any misunderstanding as to the pronunciation of the first syllable, the letter C always receiving the sound of s, but strangers have almost uniformly pronounced Chautauque as if spelled Shawtawk, giving the word only two syllables. Members of our State Legislature and merchants from that county have quite generally been addressed as Shawtawk, and to lling and pronunciation the Board of Sa-he petition of the Hon. F. T. Foote, recorrect the spelling and provided the Hon. F. T. Foote, repervisors, on the petition of the Hon. F. T. Foote, repervisors, on the petition of the Hon. F. T. Foote, repervisors, on the petition of the Hon. F. T. Foote, repervisors, on the petition of the Chautauqua,
which cannot be pronounced without giving it three
syllables, Shau-tau-qua, and which is, according to the
original Indian manner of spelling it, corresponding
with Onendaga, Casadaga, Oneida, Canandaigua, and
nearly all Indian names. The final a was probably
changed to c by a copyist, a French scholar, in the
ordice of the Holland Land Company years ago.
CHAUTAUQUA. THE GREAT TILE-DRAINER

HIS HISTORY-HIS FARM-HIS PRACTICE-AND HIS FREDING

Mr. John Johnston, near Geneva, N. Y., at one time esteemed a fanatic by his neighbors, has come of late years to be generally known as "the father of tile-drainage in America." After thirty years of precept and twenty two of example, he has the satisfaction of seeing his favorite theory fully accepted, and to some extent practically applied throughout the country. Not without labor, however, nor without much skepticism, ridicule, and controversy has this end been attained; and if, now that his head is whitened, and his course all but run, he finds himself respected and appealed to by persons in every State of the Union, he does not forget that it has been through much tribulation that he has worked out this exceeding great weight of glory. Mr. Johnston is a Scotchman, who came to this county thirty-nine years ago, and purchased the farm he now occupies on the easterly shore of Seneca Lake, a short distance from Geneva. With the pertinacity of his nation he stayed where he first settled, through ill fortune and prosperity, wisely concluding that by always bettering his farm he would better himself, and make more money in the long run than he could by shifting uneasily from place to place in search of sudden wealth. He was poor enough at the commencement; but what did that matter to a frugal, industrious man, willing to live within his means and work hard to increase them? And so with unflagging zeal he has gone on from that

His first purchase was 112 acres of land, well sitnated, but said to be the poorest in the county. He knew better than that, however, for although the pre vious tenant had all but starved upon it, and the neighbors told him such would be his own fate, he had seen poorer land forced to yield large crops in the old country, and so he concluded to try the chances for life or death. The soil was a heavy gravelly clay, with a tenacious clay subsoil, a perfectly tight reservoir for water, cold, hard-baked, and cropped down to about the last gasp. The magician com nenced his work. He found in the barn-yard a great pile of marure, the accumulations of years, well rotted, black as ink, and "as mellow as an ash-heap." This he put on as much land as possible, at the rate of seventy-five loads to the acre, plowed it in deeply, sowed his grain, cleaned out the weeds as well as he could, and the land on which he was to starve gave him about twenty-five bushels of wheat per acre. The result was, as usual, attributed to luck, and anything but the real cause. To turn over such deep furrows was sheer folly, and such heavy dressings of manure would not fail to destroy the seed. But it didn't; and let our farmers remember that it never will; and if they wish to get rich, let them cut out this article, read it often, and follow the example of our fanatical Scotch friend.

This system of deep plowing and heavy manuring wrought its results in due time. Paying off his debt, putting up buildings, and purchasing stock each year o fatten and sell, Mr. Johnston after seventeen years of hard work at last found himself ready to incur a new debt, and to commence laying tile drains. Of the benefits to be derived from drainage he had long been aware; for he recollected that when he was only ten years of age, his grandfather, a thrifty farmer in the Lothiaus, seeing the good effects of some stone drains laid down upon his place, had said, "Varily I believe the whole airth should be drained." This quaint saying, which needs but little qualification, made a last ing impression on the mind of the boy, that was to be tested by the man, to the permanent benefit of this country.

Without sufficient means himself, he applied for a loan to the Bank in Geneva, and the President, knowing his integrity and industry, granted his request. In 1835 tiles were not made in this country, so Mr. Johnston imported some as samples, and a quantity of the "borse-shoe" pattern were made in 1838, at Waterloo. There was no machine for producing them, so they were made by hand and molded over a stick. This slow and laborious process brought their cost to \$24 per thousand, but even at this enormous price Mr. Johnston determined to use them. His ditches were opened and his tile laid, and then what sport for the neighbors! They poked fun at the deluded man: they came and counseled with him, all the while watching his bright eye and intelligent face for signs of lunacy; they went by wagging their heads and saying "Aha!" and one and all said he was a most consummate ass to put crockery under ground and bury his money so fruitlessly. Poor Mr. Johnston! he says he really felt ashamed of himself for trying the new plan, and when people riding past the house would shout at him, and make contemptuous signs, he was sore-hearted and almost ready to conceal his crime BUT WHAT WAS THE RESULT? Why this: that land which previously was sodden with water and utterly unfruitful, in one season was covered with luxuriant crops, and the jeering skeptics were utterly confounded; that in two crops all his outlay for tiles and labor was repaid, and he could start afresh and drain more land; that the profit was so manifest as to induce him to extend his operations each succeeding year, and so go on until 1856, when his labor was finished, af ter having laid 210,000 tiles, or more than fifty miles in length! And the fame of this individual success going forth, one and another duplicated his experiment.

and were rewarded according to their deserts. It was not long after the manufacture of the first lot of tiles that a machine was contrived which would make them quite as well, and faster; and by its aid they were afforded at quite as low a price as after an English machine was imported. The horse-shoe tile has been used by Mr. Johnston almost exclusively, for the reason that they were the only kind to be procured at first, and on his hard subsoil, finding them to do as well as he could wish, he has not cared to make new experiments. He has drains that have been in function for more than twenty years without needing repair, and are apparently as efficient now as they were when first laid. In soft land, pipe or sole tiles would be preferable, or if horse-shoe were used they should be placed on strips of rough board, to prevent their sinking into the trench bottom, or being thrown out of the regular fall by being undermined by the running water. He has not used the plow for opening his trenches for the reason that all his work has been let out by contract, and the men have opened them by the spade; charging from twelve and a half to fifteen cents per red for opening and making the bottom ready for the tile. The laying and filling was done by

HIS PRACTICE.

His ditches are dug only two and a half feet deep, and thirteen inches wide at the top, sloping inward to the bottom, where they are just wide enough to take the tile. One main drain, in which are placed two four-inch tiles set eight inches spart, with an arch piece of tile having a nine inch span set on top of them, was dug three and a half and four feet deep, and this serves as a conduit for the water from a large system of laterals. Drains should never be left open in Winter, for the dirt dislodged by frequent frosts so fills the bottom that it will cost five or six cents per rod to clear them; and, moreover, the banks often become so crumbled away that the ditch cannot be straddled by a team of horses, and thus mest of the filling must be done by hand. Mr. Johnstor in draining a field commences at the foot of each ditch and works up to the head. He opens his mains first, and then the lateral or small drains, but he layer the tiles in the laterals and fills them completely before laying the pipe in the mains. The object of this is to prevent the accumulation of sediment in the mains which would naturally be washed from the laterals on their first being laid. By commencing at the foot of each ditch and working upward, he can always get and preserve the regular fall, which may be dictated by the features of his field, more easily than by work. ing toward the outlet. A little practice teaches the ditchers how to preserve the grade almost as well as if gauges were amployed; but before laying the tiles the instrument is applied to test the bettems ther-

ughly. The necessity of this precaution will be ap parent to any one who reflects that if a tile or two in the course of a ditch be set much too high or too low at either end, the water quickly forms a basin beneath and around, sediment is washed into the adjoining pice, and altimately even the whole bore is filled and the drain stopped. When this happens it will be indicated after a time by the water appearing at the surface of the ground above the spot-drawn upward by capillary attraction. In such a case the ditch must be reopened and the tile relaid.

ILLUSTRATIONS. Mr. Johnston says tile-draining pays for itself in two seasons, sometimes in one. Thus, in 1847 he

bought a piece of ten acres to get an outlet for his drains. It was a perfect quagmire, covered with coarse aquatic grasses, and so unfruitful that it would not give back the seed sown upon it. In 1848 a crop of corn was taken from it, which was measured and found to be eighty bushels per acre, and as, because of the Irish famine, corn was worth \$1 per bushel that year, this crop paid not only all the expense of drainage but the first cost of the land as well.

Another piece of twenty acres, adjoining the farm of the late John Delafield, was wet and would never bring more than ten bushels of corn per acre. This was drained at a great cost, nearly \$30 per acre. The first crop after this was 83 bushels and some odd pounds per acre. It was weighed and measured by Mr. Deiafield, and the County Society awarded a premium to Mr. Johnston. Eight acres and some rods of this land, at one side, averaged 94 bushels, or the trifling increase of 84 bushels per acre over what it would bear before those insignificant clay tiles were buried in the ground. But this increase of crop is not the only profit of drainage; for Mr. Johnston says that on drained land one-half the usual quantity of manursuffices to give maxmium crops. It is not difficult to find a reason for this. When the soil is sodden with water, air cannot enter to any extent, and hence oxygen cannot eat off the surfaces of soil-particles and prepared food for plants; thus the plant must in great measure depend on the manure for sustenance, and of course the more this is the case, the more manure must be applied to get good crops. This is one reason, but there are others which we might adduce it one good one were not sufficient.

Mr. Johnston says he never made money until he

drained, and so convinced is he of the benefits ac cruing from the practice that he would not besitateas he did not when the result was much more uncertain than at present-to borrow money to drain. Drains well-laid endure, but unless a farmer intends doing the job well he had best leave it alone, and grow poor, and move out West, and all that sort of thing. Occupiers of apparently dry land are not safe in concluding that they need not go to the expense of draining, for if they will but dig a turee-foot ditch in even the dryest soil, water will be found in the bottom at the end of eight hours, and if it does come then draining will pay for itself speedily. For instarce: Mr. Johnston had a lot of thirteen acres on the shore of the lake, where the bank at the foot of the lot was perpendicular to the depth of thirty or forty feet. He supposed from this fact, and because the surface seemed very dry, that he had no need to drain it. But somehow he lost his crops continually, and as he had put them in as well as he knew how, he naturally concluded that he must lay some tile. So he engaged an Irishman to open a ditch, with a proviso that if water should come into it in eight hours, he would drain the entire piece. The top soil was so hard and dry as to need an application of the pick, but at the depth of a foot it was found to be so wet and soft that a spade could easily be sunk to the entire depth of the handle. The ditches were made, and in less than the specified time a brave lot of water flowed in. The piece was thoroughly drained, and the result was an immense crop of corn. The field has regularly borne 60 to 70 bushels since. Corn was planted for a first crop in this and the preceding instances because a paying crop is obtained in one year, whereas if wheat were sown it would be necessary to wait two seasons. He always drains when the field is in grass, if possible, for the ditches can be made more easily: and Spring is chosen that the labor may not be inter

fered with by frosts. To show how necessary it is to avoid planting trees over drains, we quote a case in point. In a lot adjoin-ing his house are four large elms which are marked to be felled, and for the reason that the lot was formerly so wet that a pend of water stood upon it in Winter, and throughout the season the children skated and slid upon it. It was drained, and all went well for a time; but after three years Mr. Johnston found his drains did not discharge properly, and that in certain places the water came to the surface, so as to destroy or greatly lessen the crop above them. He could not drain at each of these spots, when, to his surprise, he found the tile completely choked with fibrous roots of the elms, which, naturally seeking the subterranean supply of water, had so accumulated in mass as to op a two-inch bore of tile.

Mr. Johnston does not think there are a hundred acres in any neighborhood that do not need draining, and would not pay well for it. Perhaps this may b thought an extreme assertion, but it is nearer the facthan most of us have been aware. Mr. Johnston is no rich man who has carried a favorite hobby without regard to cost or profit. He is a hard-working Scotch farmer, who commenced a poor man, borrowed money to drain his land, has gradually extended his operations, and is now reaping the benefits, in having crops of forty bushels of wheat to the scre. He is gray-haired Nester, who, after accumulating the experience of a long life, is now at seventy-five years of age written to by strangers in every State of the Jaion for information, not only in drainage matters, but all cognate branches of farming. He sits in hi homestead a veritable Humboldt in his way, dispensing information cheerfully through our agricultural papers, and to private correspondents, of whom he has recorded 164 who applied to him last year. His opinions are, therefore, worth more than those of a hos of theoretical men, who write without practice. He says that the retrogression of our agriculture in the olden States is to be accounted for in our lack of drainage, poor feeding of stock, which results in giving a small quantity of poor manure, and in not keeping enough to make manure. He applies 100 loads of ma nure to the acre at the beginning of a rotation, and this lasts throughout the course. He learned from his grandfather that no farmer could afford to keep any mimal that did not improve on his hands, and that as oon as it was in good marketable condition it should be sold and replaced by another. This theory he has always carried out, and, as natural consequence, has always got higher prices for his beef stock, and a

easy market even in the dullest of times. CROPS. Although his farm is mainly devoted to wheat, ye considerable area of meadow and some pasture ha been retained. He now owns about 300 acres of land. The yield of wheat has been 40 bushels this year, and in former seasons, when his neighbors were resping 8 10, or 15 bushels, he has had 30 and 40. We are in formed by him that there has been no such crop as the present since 1845, either in yield or quality; and the seence of weevil is remarkable. A variety of white wheat from Missouri, sown more thinly than usual, has yielded 31 bushels to semething less than one bushel of seed sown. It headed out a fortnight earlier than the Soule's, but ripened later-probably because thinly sown. Mr. Johnston thinks we have been sowing too thickly for fifteen years past upon rich land, and there can be no question but that he is right Still, it is better to take a medium course between thick and this sowing, and thus avoid, on the one hand, rust, overcrowding, and waste of seed, and, on the other, placing an entire crop at the mercy of inects which may attack it.

SALT FOR RUST.

As a sure preventive to rust, to give stiffaces to the straw, and to expedite the riponing of wheat, by four or five days, Mr. Johnston sows five bushels of salt to the acre, broadcast, after seeding. He thinks, more-

over, that for each of the five bushels of salt almost an xtra bushel of wheat may be expected. SIZE OF TILES FOR MAINS AND LATERALS.

A too common error with improving farmers is that of using too small tile for main drains, and too large for laterals. Those accustomed to the roomy coaduits of ordinary stone drains, suppose that nothing less than a three-inch bore will conduct the drainage from the surface into the mains, and curiously enough the same persons, unmindful of the large area drained by each system of laterals, err in using mains but lit-tle larger in bore than the latter. If any are willing to look into the results of the drainage on our Central Park, the most stupendous work of the kind in this country, and one of the best conducted, they will find that the one and a half inch and two-inch tiles there used for laterals do not run full even after the meet violent and protracted rains, and yet from a single 'system" of twelve acres, the discharge after a re cent rain was at the rate of 3 000 gallons per hour. This error of using too large tile Mr. Johnston fell into, and now that he has learned better after a twenty years' experience, he cautions his brother farmers against using larger than two-inch tile for laterals For mains each farmer must provide as the quantity of water to be conducted is greater or less. In many cases Mr. Johnston has used two rows of four-inch, in others six-inch, and in one, semi-circles of eleven inches, one at top and one at bottom, making a pipe nine inches bore to discharge water. At first he had many to take up and replace with large pipe to secure complete discharge. Main drains he makes six to eight inches deeper than those emptying into themnot with an abrupt shoulder, but leveled up, so that the descent may take place gradually in the length of two tiles -29 inches -and always giving the laterals a slight sidewise direction at the end, so that their Another error he at first fell into was, in having too many drains on lowlands and not erough on the upland; thus seeking to carry off the effect, while the cause—the out-cropping springs on the hill-side—remained untouched. Where the source of the water is most abundant, the means for removing it should most sbandantly be furnished. Rain-water falls on hills, sinks to an impervious stratum, along which it runs until it either finds a porous section through which it can fall to a lower level, or not finding such continues on the hard bottom to the side of the hill, where it crops out in the form of a spring. If this springwater is suffered to run down hill, it washes the hillside more or less, and coming to the lowland, sinks as ar as it may into the soil, makes it sodden, and produces bad effects. To drain effectually, then, we must cut off the supply above, and fewer drains will be neessary below. Here is the whole secret of the thing, and here we see why so much money is spent to so little purpose by those who think that they should only drain the wet lewland. Appearances are deceitful, and we should not suppose that a seemingly dry upland is really dry.

PEEDING CATTLE AND SHEEP. A word as to this most important subject. On poor lands good crops are got by the use of much manure This all know. But do they know as well that all ma nure is not equally good; that a cord of it that has been leached by drenching rains throughout Fall and Winter, and that has been shone upon by the sun through a hundred hot days, has lost the greater part of its efficacy? That the rivulets of brown liquor that run from the barn-yard into the public road will make more wheat than the brown-washed straw which remains? And that, be manure ever to well cared for, its value may be increased at will by the food given to the animals that make it? If they don't, Mr. Johnston does; and so, instead of freezing his stock until they are almost in articulo mortis, and starying them on dry stalks and refuse hay until the bones well nigh pierce the skin, he has comfortable sheds and deeply-littered yards for his cattle, and feeds them well at regular intervals with sweet hay, oil-cake, bean meal, and grain. The result-but what other could you expect?—is that in Spring they are in store condition; he loses none, has no disease among them, saves a large quantity of such manure that one cord of it will bring more wheat or corn than four of ordi-nary dupg, and he grows rich. Reader, if you desire to be a good farmer, go and do likewise!

CARE OF SHEEP. Mr. Johnston bought thirty Leicesters one Fall, put them in his yards, fed them each twelve ounces of oil-meal with wheat-straw, and no hay, all Winter. In Spring, he sheared from them 5 lbs. of wool each eastured them all Summer, kept them over until the following February, and sold them for nine dollars and twenty cents each. They cost him \$2. Sheep fed with oil-cake meal or grain eat but little ealt, make richer manure, more wool, and more carcass. He gives usually one pound of oil-meal when feeding with straw, and half a pound with hay. If there should be any signs of foot rot in the flock, he pares the hoof and rubs into the sores a salve of blue vitriol and lard. In very hot weather he mixes tar with the salve, to make it adhere. Sheep are never let out of the yards in Winter, but to the yard they have free access at all times from the low, open sheds, and every part of the sheds and yard are deeply bedded with clean straw. The shepherd, instead of wading through a lough worse than that described by Bunyan, walks on a soft bed of straw, so clean at any time as not to soil the white fleece of the deanest Leicester.

SCIENCE, INDUSTRY, AND INVENTION. PERPETUAL MOTION.

We are often solicited by enthusiastic and amphiloophical inventors to examine drawings of, and Esten o arguments relating to what are commonly called perpetual motion machines, i. e., machines designed be operated by a force just equal to the resisting force, as by springs, gravity, simple magnetic attraction, &c. All such cases are at once dispatched by assuring the inventor that he is trying to accomplish an mpossibility, similar to lifting himself up by his boot-

traps.

But blind enthusiasm and ignorance are not limited to these perpetual-motion inventors. We as often see them n their opposites-men of small caliber who have a alight sprinkling of science, just enough to fill their comprehensions, and run them over with the one idea that perpetual motion is impossible, i. e., they say as a spring cannot be made to wind itself up, it must necessarily follow that steam, air, and electricity are governed by the same law; in fact, they go so far as to say the law and the principle are the same in all the domains of mechanical science. Surely "a little earning is a dangerous thing."

Here, then, we have the one idea perpetual-motion men, and the one-idea anti-perpetual-motion men; the one uneducated, with tolerably comprehensive minds; the other with comprehensions so small as to overflow with the least possible knowledge.

In a scientific point of view, motion is the positive. beolute condition of all matter, while rest is a mere relative condition; and the idea that all relative motion is governed by the same laws and principles s abourd. Therefore, before condemning or receiving a device for producing or economizing power, the philorophical mind at once asks, What is the law govern ing the motive force, and what the resistance? Does the same law equally govern both? If so, it is a fals theory; if not, it is worthy a further investigation. As annihilation or absolute consumption of material is not known in science, the possibility of producing perpetual motion is entirely a pecuniary question; i. e., cas a machine receive and maintain its motion from natural forces with no other expenditure of money or manual labor than the cost of constructing and keeping the machine in repair ?

It is well known by every child that our waterfalls do this very thing; gravity drawing the water down, and evaporation forcing it back; and it has long been known by scientific men that natural laws may be applied to steam, air, or electricity, to produce like re-sults. But from the fact that power from these, as generally used, costs money, the anti-perpetual mo-tionists affirm such results not impracticable, but im-

possible; and we will not try to convince them of their error, as they are naturally hopeless and helpless while others, with a little thought, may see the cer tainty of such results as plainly as have those who actually produced them. The atmospheric engine—as has been daily seen for some weeks past at the Fair of the American Institute—requires nothing but a constant application of heat to its cylinder to produce and continue motion. Now, suppose the rays of the sun were concentrated by a lens on this cylinder, would it not be a perpetual-motion machine? This has actually been done in a small machine as a curiosity. From this it is seen that the same law and principle would make a perpetual motor of the steam, or any other

Again: the expansive force produced by a given nantity of heat cannot be measured. It is indefinite: o that the effective power produced by a bushel of coal is only limited by our ignorance of the best way of applying it; and as we are constantly gaining knowledge in this direction, our relative measure of power is constantly increasing. A belief in the perfection of our present knowledge is as false as was Watte's, that his last invention perfected the steam engine. The unlimited power in a given measure of heat is also illustrated by the atmospheric engine. Suppose one measure of air to be compressed to half its original bulk by one measure of power, after which one measure of heat be added, we shall then have two as our measure of power; and as but one measure was expended on the pump, we have on measure of effect. Now if with the same measure of air and the same measure of heat, we expend two measures of power in compressing the cold air, then we have four measures of power, which, after deducting the two measures applied to the pump, leaves us two measures of effect. Thus, with the same expenditure we have twice the power, and so on, to infinity. In practice, we are limited by two things, leakage, and atent heat becoming sensible under extreme pressures: but as we are constantly gaining mastery over these, no one doubts our continuing to do so. With a small measure of power, intense heat may be gensrated by electricity; and as science has taught us of its infinite power, whatever may be eventually learned of electro-magnetism, it is clear that no theoretical difficulty exists to prevent motion from this source and scientific gentleman in Washington, some years ago. actually perfected a device which, when all the known laws were favorable, did receive and maintain its motion without the oxydation or other apparent consumption of material.

Men who believe they understand the law and the principle in all the domains of practical mechanics, can of course learn no more. They are unable to advance in science and arts, and may well say perpetua motion is impossible. While those who do not be lieve in science, but prefer to trust to an uneducated. undisciplined mind, must continue to disappoint themselves with springs, levers, and the single force of gravity. But such of us as can comprehend that the laws of nature are infinite and ourselves finite, may, by learning more of the laws of science, make practicable what those laws so clearly show to be possible.

AN INGENIOUS IDEA .- An interesting operation was uccessfully completed late'y in Port Dundus, Scotand, for the restoration of a chimney which had settled out of the perpendicular. This was accomplished by sawing several of the mortar-beds between the courses on the side from which the chimney leaned, thereby allowing it to come back by its own weight, without the application of any external force. Only one draft was cut at a time, to guard against any shock which might have endangered the stability of the building, and by keeping the saws wet, a bed of mortar was prepared for the superincumbent weight to settle down upon. Twelve cuts were made in this manner, on different parts of the structure, which generally set before the saws had passed through half of the circumference, particularly in those made nearest the ground, where the weight was greatest. The principal dimensions of the chimney are: Total hight, 468 feet; from surface to top of cope, 454; outside diameter at foundation, 50 feet; at surface, 34 feet; at

A Music Register.-This ingenious machine, recently invented by a gentleman of Akron, Ohio, who sends us the following description, will interest arrangers and compilers of music, originators of melody, and performers generally who are not content with the productions of others:

"It is placed on the top of the piano, or other keyed instrument, directly back of the keyboard; its own weight connects it to the key by small rods running in front of the name-board. The impressions or notes are made on black canvass, passing from one roller to another, moved by clockwork, and a white coating is applied while winding. Whenever the key is depressed the lever in the machine follows, by means of a light the lever in the machine follows, by means of a light spring, sufficient to remove the coating, showing a black mark. At one end of the register is a time-beater, or metrinome, that gives the regular up, down, right and left beat, set to any variety of time desired. At the down motion is attached a marker, giving its character on the canvass and showing the commencement of each measure. The music is copied from the canvase in front by the aid of an index, or horizontal lines on glass corresponding with the character of the time-beater, or length of bars, and small lines indicating the shortest note or rest. The perpendicular lines designate the letter of each key. The canvase can pass through several times before the musical sounds are copied; and when desired all the marks are obliterated while winding up for another performance.

HIDGE EDMONDS ON SPIRITUALISM.

No. X.

THE END AND AIM OF SPIRITUAL INTER-COURSE.

To the Editor of The N. V. Tribune. Sin: There is no topic connected with this subject less thoroughly understood than this, even by firm believers in the Intercourse, and even my conceptions of it, imperfect as they must necessarily be, can hardly be detailed within the limits of this, the last of my papers. I can attempt only to refer briefly to a ew of the more important considerations.

1. No man or woman bas probably ever lived who has not at some time felt a yearning yet once again to hold communion with some loved one whom death has removed from sight, and this prayer, so instinctive and so universal with the whole family of man, is now, in the beneficence of a Divine Providence, answered more specifically and more generally than ever before known. And the first thing demonstrated o us is that we can commune with the spirits of the departed; that such communion is through the instrumentality of persons yet living; that the fact of mediumship is the result of physical organization; that the kind of communion is affected by moral auses, and that the power, like all our other faculties is possessed in different degrees, and is capable of improvement by cultivation.

2. It is also demonstrated that that which has been believed in all ages of the world, and in all religions, namely: intercourse between man in the mortal life and an intelligence in the unseen world beyond the grave-after having passed through the phases of revlation, inspiration, eracles, magic, incantation, witch craft, clairvoyance, and animal magnetism, has in this age culminated in a manifestation which can be proved and understood; and, like every other gift bestowed upon man, is capable of being wielded by him for good

ing passed the gates of death, and leaving in the minds the irresistible conclusion that if they thus live, we shall. This task Spiritualism has already per-formed on its thousands and its tens of thousands more, indeed, in the last ten years, than by all the pulpits in the land-and still the work goes bravely on. God speed it ! for it is doing what men's unside resson has for ages tried in vain to do, and who', is this age of it fidelity, seemed impossible to accomplish.

5 Thus, too, is confirmed to us the Coristian religion, which so many have questioned or denied. Not, indeed, that which sectarianism gives us nor that which descends to us from the dark ages, corrupted by selfishness or distorted by ignorance, but the which was proclaimed through the Spiritualism of Jeeus of Nazareth in the simple injunction: "Those shelt love the Lord thy God, with all thy heart, and with all thy soul, and with all thy mind. This is the first and great commandment, and the sec set is like unto it: Thou shalt love thy neighbor as thyself. On these two commandments hang all the law and the prophets."

6. As by the inspiration through a foundling of the Nile there was revealed to man the existence of each God over all, instead of the many deities he was then worshiping; and as by the inspiration of him who was born in a manger, there was next revealed men's immertal existence beyond the grave, of which even the most enlightened had then but a faint idea, so now through the lowly of the earth comes a further reve ation, confirmatory of those, and adding the mighty truth what is the existence in which that immortality is to be spent.

Throughout all the manifestations-in every form and in every language-whatever the discrepancies, uncertainties and contradictions on other topics, on this of the nature of man's future existen all coincide and harmonize. It comes is broken fragments of scattered revelations, here a little and there a little, part through one and part through another, but forming when gathered together, a sublime whole from which we can surely learn the nature and condition of the life on which we shall enter after this shall have ended.

This, as I understand it, is the great end and object of the movement, all else being merely incident to it. But it has only begun, and its progress is slow; not from want of power to communicate, but from want of capacity to comprehend. Much that has already been revealed, has not from this cause been received even by the most advanced Spiritualists, and of course act given to the world. But the work is going on. More is added day by day. And it will not be long before enough will be received by all to open to their conception a knowledge of our future existence, whose value no man can calculate-whose effects no men can im

7. Enough, however, has already been given to show that man's deetiny is PROGRESS, onward, upward, from his birth to eternity. Circumstances may retard but cannot interrupt this destiny, and man's freedom is that he may accelerate or retard, but he cannot prevent. He may hasten, as did one whose life on earth had been devoted to doing good to his fellows, and who said to me that he had passed away in the full consciousness of the change, had found himself surrounded and welcomed by those whom he had aided while on earth, and had paused not one moment in the sphere of Remorse; or he may, by a life of sin and selfishness, retard it for a period long enough to satisfy the vengeance even of an angry Deity-if such a thing can be.

8. Our progress is to be alike in knowledge, in love. and in purity. Alike in all it must be. And any cir-cumstance which causes us in any one of these elenents to lag behind the advance of the others is sure to bring unfortunate consequences in its train, though not always unhappiness. So clear, so universal is this injunction to progress in all three of these elements, that the heresies which spring up among us from our imperfect knowledge of them need give us no alarm. Even the doctrine of Free Love, revolting as it is, but which some misguided ones have attempted to foist upon our beautiful faith, need cause no anxiety, for profligacy in love is incompatible with progress in purity. And while the command is "Love ye one another," so ever attendant upon it is that other, "Be ye pure even as your Father in

Heaven is pure." Incidental to these more important points are many minor considerations on which I cannot now dwell. By a careful attention they will all be found consistent with these weightier matters. Distorted sometimes by the imperfection of the mediums through which the intercourse comes, and sometimes perverted by ered and patiently studied until understood, I can safely assert, after nearly nine years earnest attention to the subject, that there is nothing in Spiritualism

worth and public virtue. True, to some it is a mere matter of curjosity, and to others a philosophy, but to many it is now, and to all, in the end, will be a religion, because all religion is the science of the future life, and because it never fails to awaken in the heart that devotion which is at

once a badge and an attribute of our immortality.

J. W. EDMONDS

IMPROVED BATHS.—An improvement has been lately effected in the construction of baths, by means of which the hot air or vapor may be introduced inte the bath, and diffused more uniformly than heretofore. The bath is constructed of zinc, to admit of the body lying horizontal. The head of the patient extends beyond the bath, and is supported by a rest. A groove is made all round the upper edge of the beth, and when the patient has been placed in the beth on a board or wooden frame, a zinc cover is placed in such a manner that the lower edges of it are received in the a manner that the lower edges of it are received in the groove round the upper edge of the bath, and by filling this groove with water a steam-tight chan-nel all round the bath is obtained, except where the head extends beyond the cover. This part is also made as steam-tight as possible by blankets or cloths. Steam or vapor is admitted by a perforated pipe arranged in a serpentine direction, so that it may be diffused over the lower part of the bath. Above the perferated pipe, and beneath the board on which the patient is lying, is placed a sheet of perforated size of suitable dimensions, which causes the vapor to be more diffused, and provents any rush of hot vapor striking upon any part of the patient.

FROM NEWFOUNDLAND .- By the arrival of the E. M. Steamer Oepray very late St. John papers have come to hand. Election matters engross a good deaf of their space. The weather has been more betsteroes than experienced in the colony for many years. Several vessels are reported lost, and had news is satisfipated from the Labrador and distant outports of the Island. A few of the Labrador fleet had arrived, and confirm the previous reports of a successful fishery there. The take of herring has been unusually large, and the quality excellent. Unfavorable weather had checked business transactions in St. John. Prices of most articles of commerce remained about the same. The St. John of commerce remained about the recent report to the papers will scarcely credit the recent report to the effect that the French Commissioners had it all their own way in the settlement of the long-pending and own way in the settlement of the Newfoundiand fishvitally important question of the Newfo

apon man, is capable of being wielded by him for good or perverted to evil.

3. That which has thus dealt with man in all time is not, as some have supposed, the direct voice of the Creator, nor of the Devil, as a being having an independent existence and a sovereignty in the universe of God, nor of Angela, as a class of beings having a distinct creation from the human family, but of the spirits of those who have like us lived upon earth in the mortal form.

4. These things being established, by means which show a settled purpose and intelligent design, they demonstrate man's immortality, and that in the simplest way, by appeals allike to his reason, to his affections, and to his sensee. They thus show that they whom we care knew as living on earth do yet live after hav-